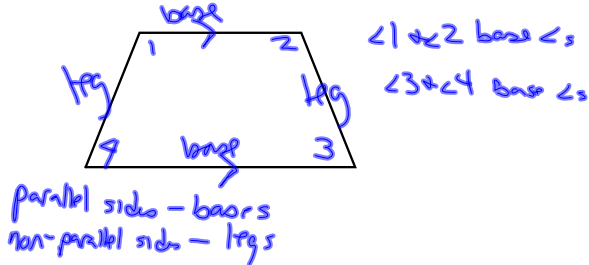
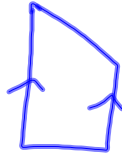
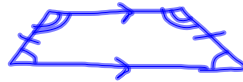


8-5 Use Properties of Trapezoids and Kites

trapezoid--quadrilateral with exactly one pair of parallel sides



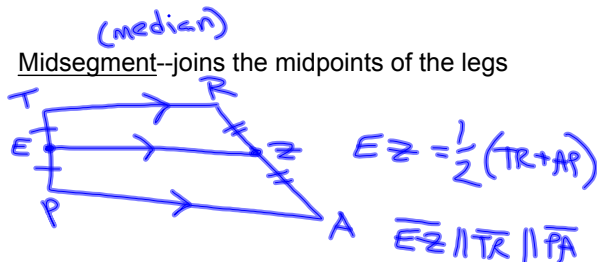
isosceles trapezoid -- congruent legs



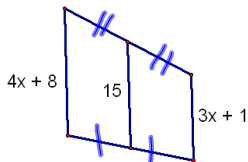
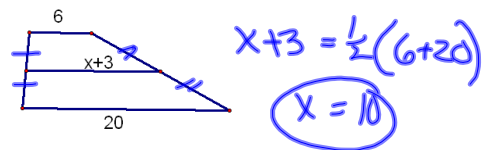
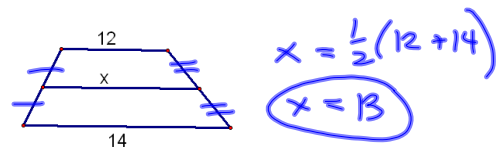
Theorem 8.14--If a trapezoid is isosceles, then each pair of base angles is congruent

Theorem 8.15--If a trapezoid has a pair of congruent base angles, then it is isosceles.

Theorem 8.16--A trapezoid is isosceles iff its diagonals are congruent



Theorem 8.17--The midsegment of a trapezoid is parallel to the bases and = $\frac{1}{2}$ the sum of the lengths of the bases



$$15 = \frac{1}{2}(7x+9)$$

$$30 = 7x+9$$

$$3 = x$$

Verify that ABCD is a trapezoid.

A(5, 1)
B(-3, -1)
C(-2, 3)
D(2, 4)

$$\overline{AB} \text{ } m = \frac{1}{4}$$

$$\overline{CD} \text{ } m = \frac{1}{4}$$

$$\overline{AD} \text{ } m = -1$$

$$\overline{BC} \text{ } m = 4$$

ABCD is a trapezoid exactly one pair of // sides

HW

p546-548

5,7-15, 18-22, 25-27,

30, 32,39